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10/676,541

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Mark L. Wilkinson

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EXAMINER

TRUONG, THANHNGA B

ART UNIT

PAPER NUMBER

2135

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/676,541

Applicant(s)

WILKINSON ET AL.

Examiner

Thanhnga B. Truong

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the communication filed on May 23, 2007. Claims 1-66 are pending. At this time, claims 1-12, 14-32, 34-44, 46-56, and 58-66 are still rejected.

Response to Argument

2. Applicant's arguments filed May 23, 2007, with respect to the rejection(s) of claim(s) 1-66 under 35 USC 101 have been fully considered but they are not persuasive. The amended claimed language "computer-implemented" recites in claim 1 and amended claimed language "computer-readable media encoded with" recites in claims 31-55 do not change the status of non-statutory subject matter. They do not show being tangibly embodied in a manner so as to be executable. Therefore, it is believed that the rejections should be sustained.

Applicant's arguments filed May 23, 2007, with respect to the rejection(s) of claim(s) 1-12, 14-32, 34-44, 46-56, and 58-66 under 35 USC 102 have been fully considered but they are not persuasive.

Applicant argues that:

Carter does not teach inferring a respective state of at least one device of the plurality of devices based upon the observing the communication and wherein the respective state of the first device is determined to be omitted when the observing is programmed to omit communication with the first device from the observing.

Examiner does not agree with the applicant and still maintains that:

Carter does teach the claimed subject matter. In fact, paragraph [0207] of Carter does teach the respective state of a device. Thus, the rejection is proper.

Carter does not need to disclose anything over and above the invention as claimed in order to render it unpatentable or anticipate. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claimed limitations.

For the above reasons, it is believed that the rejections should be sustained at least for claims 1-12, 14-32, 34-44, 46-56, and 58-66.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-66 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites "a method comprising: observing communication between a plurality of devices; and inferring a respective state of at least one device of the plurality of devices based upon the observing the communication." The claim is clearly a software program and it is non-statutory as not being tangibly embodied in a manner so as to be executable. Therefore, claim 1 recites a non-statutory subject matter.

Claims 2-42 are dependent of claim 1, thus they are rejected with the same rationale applied against claim 1 above.

Claim 43 has limitation that is similar to those of claim 1, thus they are rejected with the same rationale applied against claim 1 above.

Claims 44-54 are dependent of claim 43, thus they are rejected with the same rationale applied against claim 43 above.

Claim 55 has limitation that is similar to those of claim 1, thus they are rejected with the same rationale applied against claim 1 above.

Claims 56-66 are dependent of claim 55, thus they are rejected with the same rationale applied against claim 55 above.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-12, 14-32, 34-44, 46-56, and 58-66 are rejected under 35 U.S.C. 102(e) as being anticipated by Carter et al (US 2003/0051026).

a. Referring to claim 1:

i. Carter teaches a computer-implemented method comprising:
(1) observing communication between a plurality of devices (**paragraph 0219 of Carter**); and
(2) inferring a respective state of at least one device of the plurality of devices based upon the observing the communication (**paragraphs 0219 and 0242 of Carter**).

b. Referring to claim 3:

i. Carter further teaches:
(1) wherein the inferring is performed without participating in the communication with the at least one device (**paragraph 0560 of Carter**).

c. Referring to claim 4:

i. Carter further teaches:
(1) wherein the inferring is performed only by listening (e.g., eavesdropping) to the communication with the at least one device (**paragraphs 0122, 0560 and 1066 of Carter**).

d. Referring to claim 5:

i. Carter further teaches:
(1) setting a designation for a first device of the plurality of devices to a threat when the first device receives a packet and the respective state of the first device is unfulfilled (**paragraphs 0006 and 0260-0261 of Carter**).

e. Referring to claim 6:

i. Carter further teaches:

(1) changing the designation for the first device to a non-threat when subsequent communication initiated by the first device does not violate a rule for the communication (**paragraphs 0479 and 0785-0787 of Carter**).

f. Referring to claim 7:

i. Carter further teaches:

(1) setting a designation for a first device of the plurality of devices to a possible threat when the communication is initiated by the first device (paragraphs 0006 and 0260-0261 of Carter), and the communication initiated by the first device violates a rule (**paragraphs 0787, 0790, 0978-0984 of Carter**).

g. Referring to claim 8:

i. Carter further teaches:

(1) changing the designation for the first device to a non-threat when subsequent communication initiated by the first device does not violate a second rule for the communication (**paragraphs 0479 and 0785-0787 of Carter**).

h. Referring to claim 9:

i. Carter further teaches:

(1) setting a designation for a first device of the at least one device to a possible threat based upon a packet configuration for a packet sent by the first device as part of the communication (**paragraphs 0006 and 0260-0261 of Carter**).

i. Referring to claim 10:

i. Carter further teaches:

(1) the respective state of a first device of the at least one device is determined to be unknown (**paragraphs 0260-0261 and 0652 of Carter**).

j. Referring to claim 11:

i. Carter further teaches:

(1) the respective state of the first device is determined to be unknown (**paragraphs 0260-0261 and 0652 of Carter**) when the observing the communication comprises observing that the first device fails to respond to the communication sent to the first device (paragraphs 0289, 0787, and 0985 of Carter).

k. Referring to claim 12:

i. Carter further teaches:

(1) the respective state of a first device of the at least one device is determined to be unfulfilled (**paragraphs 0006 and 0260-0261 of Carter**).

l. Referring to claims 13, 33, 45, 57:

i. These claims are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

m. Referring to claim 14:

i. This claim has limitations that is similar to those of claim 11, thus it is rejected with the same rationale applied against claim 11 above.

n. Referring to claim 15:

i. Carter further teaches:

(1) the respective state of a first device of the plurality of devices is determined to be used (**paragraphs 0260-0261 and 0652 of Carter**).

o. Referring to claim 16:

i. Carter further teaches:

(1) the respective state of the first device is determined to be used when the observing the communication comprises observing that the first device performs one of sending and receiving a packet (**paragraphs 0019, 0023-0024, and 0028 of Carter**).

p. Referring to claim 17:

i. Carter further teaches:

(1) the respective state of the first device is determined to be used when the observing the communication comprises:

(2) observing that the first device received a packet when the respective state for the first device was unfulfilled (**paragraphs 0006 and 0260-0261 of Carter**), and

(3) observing that the first device sent a reply to the packet within a time limit (**paragraphs 0028, 0084, and 0152 of Carter**).

q. Referring to claim 18:

i. Carter further teaches:

(1) wherein the respective state of a first device of the plurality of devices is determined to be virtual (**paragraphs 0011 and 0166 of Carter**).

r. Referring to claim 19:

i. Carter further teaches:

(1) wherein the respective state of the first device is determined to be virtual when the observing the communication comprises:

(2) observing that the first device received a packet when the respective state for the first device was unfulfilled (**paragraphs 0006 and 0260-0261 of Carter**), and

(3) observing that the first device did not send a reply to the packet within a time limit (**paragraphs 0028, 0084, 0152, and 0870 of Carter**).

s. Referring to claim 20:

i. Carter further teaches:

(1) wherein the respective state of a first device of the plurality of devices is determined to be automatic (**paragraphs 0800-0801, and 0945 of Carter**).

t. Referring to claim 21:

i. Carter further teaches:

(1) wherein the respective state of the first device is determined to be automatic when an automatic reply is programmed to be sent to a second address when the first device receives a packet from the second address (**paragraphs 0800-0801, and 0945 of Carter**).

u. Referring to claim 22:

i. Carter further teaches:

(1) wherein the respective state of the first device is determined to be omitted (e.g., ignored) (**paragraphs 0431, 0870, 0920, and 0966 of Carter**).

v. Referring to claim 23:

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i. Carter further teaches:

(1) wherein the respective state of the first device is determined to be omitted when the observing is programmed to omit communication with the first device from the observing (**paragraphs 0431, 0870, and 0966 of Carter**).

w. Referring to claim 24:

i. Carter further teaches:

(1) initializing the respective state of at least one device of the plurality of devices to unknown prior to the observing (**paragraphs 0260-0261, 0785, and 0881 of Carter**).

x. Referring to claim 25:

i. Carter further teaches:

(1) wherein the plurality of devices communicates via a segment (e.g., portion) of a network (**paragraphs 0228, 0258, and 0652 of Carter**).

y. Referring to claim 26:

i. Carter further teaches:

(1) maintaining the respective state for one device of the at least one device in a storage area (**paragraphs 0207 and 0772 of Carter**).

z. Referring to claim 27:

i. Carter further teaches:

(1) wherein storing information about at least one packet of a plurality of packets communicated between the plurality of devices (**paragraphs 0207 and 0772 of Carter**).

aa. Referring to claims 28-30:

i. Carter further teaches:

(1) wherein the information comprises a respective source address and a respective destination address and a protocol for each packet of the plurality of packets; and a time that each packet of the plurality of packets was sent (**paragraphs 0208-0216 of Carter**).

ab. Referring to claims 31-32, 34-42:

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i. These claims consist a system to implement claim 1, thus they are rejected with the same rationale applied against claims 1, 10-11,13-14,16-17,19,21,23,26-27 above.

ac. Referring to claims 43-44, 46-54:

i. These claims consist a system to implement claim 1, thus they are rejected with the same rationale applied against claims 1, 10-11,13-14,16-17,19,21,23,26-27 above.

ab. Referring to claims 55-56, 58-66:

i. These claims consist a computer-readable medium to implement claim 1, thus they are rejected with the same rationale applied against claims 1, 10-11,13-14,16-17,19,21,23,26-27 above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al (US 2003/0051026), and further in view of Beach (US 6,067,297).

a. Referring to claim 2:

i. Carter further teaches:

(1) wherein the inferring is performed without sending a packet to the at least one device (**paragraphs 0057 and 0559 of Carter**).

ii. Although Carter is silent on the capability of showing the communication between plurality of devices without the need of sending a packet, Beach clearly discloses performed without sending a packet to the at least one device (**column 18, lines 5-25 of Beach**).

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) have modified the invention of Carter with the teaching of Beach to provide another alternative approach for use in communications network (**column 18, line 5 of Beach**).

iv. The ordinary skilled person would have been motivated to:

(1) have modified the invention of Carter with the teaching of Beach to monitoring and protecting networks of computers (**paragraph 0003 of Carter**).

Conclusion

9. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

a. Faigon et al (US 6,006,016) disclose network fault correlation (see Title).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

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TBT

August 01, 2007

Chakraborty B. Tm
Primary Examiner AU2135